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CGS 7.3.0 SW Release Notes

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This document issue provides the description of the CGS SW release 7.3.0.

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1. Introduction

1.1 Identification and Scope

This document is the CGS 7.3.0 SW Release Notes. The release is identified by document CGS SRO [AD 2].

CI Name : CGS SW

CI Number : 1130992

CI Variant : 7.3.0

1.2 Purpose

The purpose of this software release is a delivery of a tested version of CGS for internal use only.

1.3 Document Layout

This document has the following layout:

Chapter 1 provides the document identification and identifies under which CI this document is prepared. It also identifies the next higher level component CI. Chapter 1 also provides an overview of the purpose of the document and the overall document structure.

Chapter 2 provides the list of documents which are applicable or are referenced.

Chapter 3 provides an overall description of the release. Thus in this chapter all SW products being integrated are listed including the temporary fixes necessary to run the SW. This chapter also provides the identification of CCU versions being used for the SW product integration (if any).

Chapter 4 provides an overview of the release status. This includes a statement on the current test status and the identification of SPRs being fixed with this release.

Chapter 5 provides the installation instruction for the CGS SW.

Appendix A provides a list of abbreviations being used

Appendix B provides a list of terms being used in a certain sense.

Appendix C provides the file listing of the delivery.

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2. Applicable and Reference Documents

CGS Documents:

	name	issue	date
Technical Note			
ESO-IT-RN-0110	CGS SW Release Notes (Linux)	4	23.05.2011
CGS-RIBRE-TN-0002	The CGS Authorization Concept	2/B	04.09.2006
SW Release Order			
ESO-IT-SRO-0204	CGS Software Release Order (Linux)	4	23.05.2011
User Manuals			
CGS-RIBRE-SUM-0001	CGS User Manual	11/-	31.03.2011
CGS-RIBRE-SUM-0002	CGS Installation Manual (Linux)	6/-	31.01.2011
CGS-RIBRE-SUM-0003	MDA Reference Manual	1/F	29.01.2010
CGS-RIBRE-SUM-0004	MDA Administration Manual - see COL	1/-	
CGS-RIBRE-SUM-0005	DADIMA Reference Manual	1	09.11.2001
CGS-RIBRE-SUM-0006	DADIMA Administration Manual	1	09.11.2001
CGS-RIBRE-SUM-0007	GWDU User's and Operations Manual	2	28.08.2006
CGS-RIBRE-MA-0001	UCL Debugger User Manual	1	01.09.2004
CGS-RIBRE-MA-0003	call - A tool to add a graphical user interface to command line based programs	1/-	01.03.2006
CGS-RIBRE-MA-0004	"mdb - MDB Access Tool"	1/A	01.02.2009
CGS-RIBRE-MA-0005	"generate - Text Generation Tool"	1/-	01.03.2006
CGS-RIBRE-MA-0006	CDU Merge Users Manual	1	14.03.2006
CGS-RIBRE-MA-0007	Start Center - A generic user interface for multi-process systems	1/C	04.09.2007
CGS-RIBRE-MA-0008	An XML Based Configuration Concept	1/-	01.10.2006
COL-RIBRE-MA-0018-00	MDA Administration Manual	4/B	31.03.2000
COL-RIBRE-MA-0030-00	MDA Introduction Manual	3/B	04.04.1997
COL-RIBRE-MA-0037-00	DADIMA Introduction Manual	3	04.04.1997
COL-RIBRE-MA-0046	SID Range Tool Users and Operations Manual	1	15.09.1997
Reference Manuals			
CGS-RIBRE-STD-0001	User Control Language (UCL) Reference Manual	5/-	29.01.2010
CGS-RIBRE-STD-0002	High Level Command Language (HLCL) Reference Manual	5/-	29.01.2010
CGS-RIBRE-STD-0003	Virtual Stack Machine and I-Code Reference Manual	5/-	29.01.2010
COL-RIBRE-STD-0008	Reference Manual for Crew Procedure Language and Software, Commanding	1/F	31.10.2001
Requirements Specifications			
CGS-RIBRE-SPE-0001	Columbus Ground System (CGS) Requirement Specification	2/D	23.03.2004
CGS-RIBRE-SPE-0002	CGS Test Case Specification and Test Procedure	7/-	30.06.2008
Design Documentation			
COL-RIBRE-ADD-0006	Columbus Ground System (CGS) Software Architectural Design Document	4/B	30.10.1997
Interface Definitions			
CGS-RIBRE-ICD-0001	System to CGS ICD	1/-	31.01.2002
CGS-RIBRE-ICD-0002	MDB Standard Entities and Application Program Interface	1/-	
ESO-IT-LI-0070	List of IRNs fromCGS-RIBRE-ICD-0001	1	01.07.2008
ESO-IT-LI-0071	List of IRNs from CGS-RIBRE-ICD-0002	1	01.07.2008

USS Documents:

	name	issue	date
SW Release Note			
ESO-IT-RN-0095	USS 2.19.1 Release Note	1/A	27.09.2010
SW Release Order			
ESO-IT-SRO-0143	USS SW 2.19.1	3	27.09.2010

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3. Release Overview

3.1 CCU Version Identification

This CGS SW Release provides no mission database content.

3.2 Integrated Products

In following table all SW components are identified necessary to build this release of the CGS SW.

- CGSI
- CLS
- DBS / Command History
- GWDU
- HCI
- MDA / CGS_MDB_V7_3_0
- TES
- TEV
- TSCV
- TSS
- CGS_API

3.3 Release Media & their Contents

The System is delivered on DVD as described in SW Release Order of ref. [AD 2].

This delivery contains online documentation only.

3.4 Identification of the Generation and Test Environment

The CGS SW Generation environment is described in chapter 5 of the release notes of ref. [AD 2].

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4. SW Release Status

4.1 Release Status

The release status is: **VALIDATED (FOR INTERNAL USE ONLY)**

The SPRs fixed in this release have been regression tested as documented in the CGS SPRdb. It has been assessed that the code changes have no impact to the qualification status of other SW modules of CGS as released in former versions.

4.2 Test Status

This CGS SW was tested on commercial baseline. The test status is delta qualified by CGS - AIV.

4.3 Commercial Baseline

- ✓ Suse Linux Enterprise Server 10 / ServicePack2 / 32 bit
- ✓ Oracle 11.1.0.6.0
- ✓ CGS API build with gnat 6.3.2
- ✓ CIS CORBA Server built with PrismTech OrbAda 2.7.0 (CORBA 2.5, GIOP 1.2)
- ✓ USS version 2.21.0pre (build-20110520-0937) @72625 (*)
- ✓ Java 1.6.0_14 (*)

This CGS SW release shall be executed on Intel PC with SUSE Linux Enterprise Server 10 (SLES10 - 32 bit) based environments.
(*) marked components are available on CGS delivery

4.4 Recommended Hardware Baseline

- ✓ It is recommended to use NVIDIA graphic card and the proper NVIDIA driver for usage of USS.

4.5 Compatibility Statement

The CGS software is not compatible to CGS 7.2.1 / CGS 7.2.2 at all.

- The Special Application Software (SAS) build with CGS API CGS 7.2.0 / CGS 7.2.1 / CGS 7.2.2 are not compatible to current CGS version.
- The simulation models are not compatible and have to rebuild due to changes in CSS.
- The I-Code and the used UCL system libraries are fully compatible to CGS 7.2.2.

4.6 New or Updated Components

All software components are updated.

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4.7 New features in CGS 7.3.0

What's new in CGS_7.3.0 (in different to CGS 7.2.2)?

4.7.1 CGS Online Control (HCI) are based now on GtkAda (SPR-102237)

CGS Online Control has been changed. The XView toolkit has been replaced by GtkAda toolkit. HCI has now a modern look and feel user interface.

Look into user manual for the detailed description.

The major changes are:

- based on GtkAda
- no GIPSY support - synoptics are displayed in USS only
- the status line was removed

4.7.2 Better integration of USS in CGS (SPR-101861)

Different interactions as result of a system library calls initiated by USS are now handled in the CGS content correctly. Following system library calls are affected:

- READ_MESSAGE_FROM_USER
- WRITE_MESSAGE_TO_USER
- READ_NUMBER_FROM_USER
- START_PROGRAM
- OPEN_AP_OUTPUT_WINDOW
- CLOSE_AP_OUTPUT_WINDOW

The required action will be done by the parent HCI, which is starting the USS application.

Additional for the quick line graph the USS application will be used now instead of a GIPSY-based application.

4.7.3 Support tool for upgrade monitoring configurations and screen setups (SPR-102379)

There is a new support tool to upgrade and change older monitoring definitions and screen setups. Nevertheless HCI is able to load old monitoring definitions and screen setups from former CGS versions.

```
> $CGS_HOME/gsaf/hci/bin/linuxi/screen_setup_tool -h
screen_setup_tool <- Screen Setup Tool.
  -help ["..."]   <- print help text ["..." = long]
  -verbose        <- Verbose mode.

  upgrade         <- Upgrade previous screen setups/monitoring window definitions to current version.
    <source>...   <- List of source files.

  remove          <- Remove column definitions from OOL and Monitoring window parameters.
    <source>...   <- List of source files.

  mw_replace    <- Replace column definitions of Monitoring window parameters by those from template.
    <source>...       <- List of source files.
    -template <value> <- Filename of a monitoring window configuration used as template.
```

4.7.4 CGS Print-Service Housekeeping Values are obsolete (SPR-102321)

Following CGS print service housekeeping variables are removed:

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```
C_Pr1_Status : constant T_Identifier := 1_001;
C_Pr2_Status : constant T_Identifier := 1_002;
C_Pq1_Status : constant T_Identifier := 1_003;
C_Pq2_Status : constant T_Identifier := 1_004;
C_Pq1_Jobs   : constant T_Identifier := 1_005;
C_Pq2_Jobs   : constant T_Identifier := 1_006;
```

Following error message will be displayed during usage of obsolete housekeeping values in message window:

Error in configuration data. (\.<Nickname>)
<Pathname> use an obsolete HK value with ID: <Hk_Id> , which is not longer supported. For compatiblily reasons it will be defined as normal SW variable. Please correct in the MDB!

4.7.5 New CGS Housekeeping Value for count of measurements with processing disabled (SPR-101862)

CGS adds a new CGS Housekeeping Value "Number of not processed (processing disabled) items":

```
C_Nb_Not_Processed : constant T_Identifier := 325
```

4.7.6 New system privilege CIS:HLCL_ABORT_AP

The new CGS system privilege CIS:HLCL_ABORT_AP enables CIS clients to execute the HLCL commands ABORT_AP and ABORT_ALL_APS.

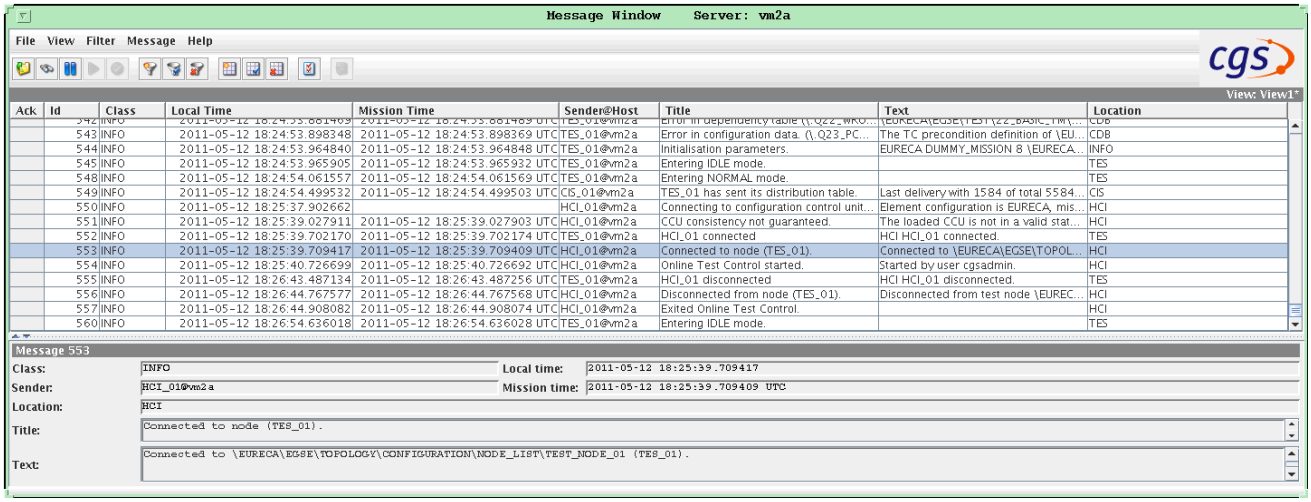
4.7.7 New event message mechanism (SPR-102236)

CGS has implemented a new event mechanism. All events are sent to a single event logger per CGS. This event logger receives all messages, distributes the messages to message clients and archives.

The message structure has been changed. It is now a CSV-based structure.

A default archiver logs all messages to a daily log file (syntax: YYYY-MM-DD.log) in directory *$CGS_HOME/local/data/log* and optional to TRDB, if available.

All messages are displayed with milliseconds accuracy in new message window. The same tool is used to display stored events from TRDB as well as stored log files and for online display.


Message Window Server: vm2a
File View Filter Message Help
cgs
View: View1*
Ack Id Class Local Time Mission Time Sender@Host Title Text Location
543 INFO 2011-05-12 18:24:53.898348 2011-05-12 18:24:53.898369 UTC TES_01@vm2a Error in configuration data. (\.Q23_PC... The TC precondition definition of \EU... CDB
544 INFO 2011-05-12 18:24:53.964840 2011-05-12 18:24:53.964848 UTC TES_01@vm2a Initialisation parameters. EURECA DUMMY_MISSION 8 \EURECA... INFO
545 INFO 2011-05-12 18:24:53.965905 2011-05-12 18:24:53.965932 UTC TES_01@vm2a Entering IDLE mode. TES
548 INFO 2011-05-12 18:24:54.061557 2011-05-12 18:24:54.061569 UTC TES_01@vm2a Entering NORMAL mode. TES
549 INFO 2011-05-12 18:24:54.499532 2011-05-12 18:24:54.499503 UTC CIS_01@vm2a TES_01 has sent its distribution table. Last delivery with 1584 of total 5584... CIS
550 INFO 2011-05-12 18:25:37.902662 HCI_01@vm2a Connecting to configuration control unit... Element configuration is EURECA, mis... HCI
551 INFO 2011-05-12 18:25:39.027911 2011-05-12 18:25:39.027903 UTC HCI_01@vm2a CCU consistency not guaranteed. The loaded CCU is not in a valid stat... HCI
552 INFO 2011-05-12 18:25:39.702170 2011-05-12 18:25:39.702174 UTC TES_01@vm2a HCI_01 connected HCI HCI_01 connected. TES
553 INFO 2011-05-12 18:25:39.709417 2011-05-12 18:25:39.709409 UTC HCI_01@vm2a Connected to node (TES_01). Connected to \EURECA\EGSE\TOPOL... HCI
554 INFO 2011-05-12 18:25:40.726699 2011-05-12 18:25:40.726692 UTC HCI_01@vm2a Online Test Control started. Started by user cgsadmin. HCI
555 INFO 2011-05-12 18:26:43.487134 2011-05-12 18:26:43.487256 UTC TES_01@vm2a HCI_01 disconnected HCI HCI_01 disconnected. TES
556 INFO 2011-05-12 18:26:44.767577 2011-05-12 18:26:44.767568 UTC HCI_01@vm2a Disconnected from node (TES_01). Disconnected from test node \EUREC... HCI
557 INFO 2011-05-12 18:26:44.908082 2011-05-12 18:26:44.908074 UTC HCI_01@vm2a Exited Online Test Control. HCI
560 INFO 2011-05-12 18:26:54.636018 2011-05-12 18:26:54.636028 UTC TES_01@vm2a Entering IDLE mode. TES
Message 553
Class: INFO
Local time: 2011-05-12 18:25:39.709417
Sender: HCI_01@vm2a
Mission time: 2011-05-12 18:25:39.709409 UTC
Location: HCI
Title: Connected to node (TES_01).
Text: Connected to \EURECA\EGSE\TOPOLOGY\CONFIGURATION\NODE_LIST\TEST_NODE_01 (TES_01).

Due to the new message mechanism some changes are necessary and for some interfaces a mapping is needed.

- The **executable** *send_message* is removed and will be replaced by *write_message* with a changed

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parameter profile. If you are not able to adapt the calls for the new message service for some reasons, you can use for this purpose the wrapper script *$CGS_HOME/gsaf/cgsi/bin/common/send_cgs_message.sh*. The executables *message_handler* and *message_server* are removed.

- The **CORBA IDL** is unchanged, but due to the changes of the message structure some mappings are necessary:
  - The old severities are mapped now to the new message classes.

```
/** Datatype for the severity of a message of the CGS Message. */
/** Remark: Since CGS 7.3.0 the CGS serverity has been changed.*/
  enum LogEventMessageSeverity {
  /** INFO mapped to INFO */
      INFO,
      /** MSG  mapped to INFO */
      MSG,
      /** WRN  mapped to WARNING */
      WRN,
      /** ERR  mapped to ERROR */
      ERR,
      /** ALRM mapped to FATAL */
      ALRM,
      /** EXC  mapped to ERROR */
      EXC
    };
```

  - The extraText field in the LoggedEventMessage and LogEventMessage is obsolete. If it is given, it will add to longText field. The predefined length restrictions are obsolete.
  - The Exception ServiceNotAvailable will be raise for calls of subscribeEventLog and getEventLogReport.
- The **CGS_API** call *SEND_ERROR_MESSAGE* for event logging is unchanged.
- The **system library** call *WRITE_MESSAGE_TO_USER* is for compatibility reasons unchanged, but the parameters WORKSTATION and ALL_WORKSTATIONS are unused now.

4.7.8 New environment variable $CGS_EDITOR (SPR-101681)

CGS uses now the environment variable $CGS_EDITOR as default editor. The default is set to */opt/kde3/bin/kwrite*, but it can be changed by the user. The tool *textedit* is not longer supported.

4.7.9 New EVL file format

The Engineering Value Log (EVL) file format has been changed from binary to a CSV-based ASCII format.

4.7.10 Changed parameter profile for export/import of command history (SPR-102351)

CGS extends the options for export of command history data.

```
> $CGS_HOME/gsaf/dbs/util/common/command_history/export_partitions -help
Administration Commands export_partitions
NAME
            export_partitions
SYNOPSIS
            Usage: export_partitions [[--all | --current | [--from_date from_date &| --to_date
to_date]] [--directory] [--force] [--gzip]] | [--help]

DESCRIPTION
            This script exports data from command history database partitions into files.

PARAMETERS
            --current|-c          exports the current partition
            --all|-a              exports all partitions
            --from_date           exports partitions where command date >= from_date
                                  date format: YYYY-MM-DD or DD-MON-YYYY
```


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```
                                example    : 2010-08-01 or 01-OCT-2010
            --to_date           exports partitions command date < to_date
            --directory|-d      export directory
            --force|-f          force file if already exists
            --gzip|-g           gzip export file
            --help|-h           Help

> $CGS_HOME/gsaf/dbs/util/common/command_history/import_partitions -help
Administration Commands import_partitions
NAME
            import_partitions

SYNOPSIS
            Usage: import_partitions [--file] | [--helph]

DESCRIPTION
            This script imports data from files stored by the export_partitions script
            into command history database partitions.

PARAMETERS
            --file|-f           filename or directory name
            --help|-h           Help
```

4.7.11 CGS is now able to run without ORACLE based TRDB (SPR-102093)

CGS allows now to configure the usage of TRDB with a new configuration parameter *System.Trdb_Storage*.

It specifies the storage location of TRDB data:

Database : The TRDB data are stored in Oracle database and in filesystem

Filesystem : The TRDB data are stored in filesystem only (not yet implemented - planned for next CGS version)

None : No TRDB data are stored, except event messages below $CGS_HOME/local/data/log

In this CGS version it is possible to use an Oracle-based TRDB or no TRDB, whereby the default is Oracle-based TRDB.

4.7.12 Final Archive SAS has been removed

The external process to export and import Execution Sessions has been integrated into the DBS processes. The functionality in TEV to export and import is available, but no extra process with a user interface will be used.

The user interface in TEV for archiving has been removed.

The Final Archive mechanism in TSCV is still available, but it is now an export of the closed session without deletion of existing online session.

4.7.13 CSS changes (summary)

Due to some changes in CSS it is necessary to recreate all CSS model within the new CGS version. The changes in detail are:

- SPR-101995 : Give each kernel its individual shared memory/semaphore resources

  Resources are addressed via a unique <model_key>, which has to be passed to model_connection.Start by both kernel and CMAS (which receives it from the kernel as 1st parameter).

  This should guarantee that each kernel can create its required shared memory/semaphores; cleanup of obsolete resources still has to be implemented to avoid consumption of system resources.

  NOTE for CMAS implementation:

  1. Parameters of $CMAS_HOME/bin/common/start_cmas call by kernel have been changed:

  start_cmas <model_key> <milbus_config_path> <shm_var_size> <shm_stat_size>

  2. Parameters of model_connection.Start have been changed - see model_connection.ads

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- SPR-102324: use MODEL_KEY for CMAS SV file name as well (only for TMP file shared with CMAS)

  NOTE for CMAS implementation:

  Only use Model_Connection.CMAS_SV_TMP_FILE_PATH to read/create CMAS SV file; must have called Model_connection.Start with Model_Key received from kernel first!

- SPR-102155 : Make css_kernel_if extensions for MOCS_SAS CGS standard interface

  MOCS_SAS version adapted:

  - changed to non-generic package

  - extended to support multiple parallel kernel connections from one application

  This requires some changes in MOCS_SAS to adapt to the changed package interface.

  Changed css_start_kernel script to start kernel in background and check for MOCS info file, writing its output to a logfile (needs adaptation of MOCS) and setting exit status: 0=OK, 1=FAIL

- SPR-102139: fixed UNIX_SOCKETS.hton*/ntoh*

  some data types changed from signed (still used for historical reasons) to unsigned

- SPR-101948: check TSS status before calling TSS service; report only status changes to client.

  Added one initial 'TSS available' status message in the MOCS console window.

- CSS kernel messages in message window now identify as <model>@<host> instead of kernel@<host>

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4.8 SW Problem Status

4.8.1 SPR Status and Impact Analysis

For this release 151 SPR's are solved.

ID▲	TITLE	REFERENCE
SPR-10428	Connect_To_CSS_UI not implemented	COL-RIBRE-SPR-10428
SPR-16182	Concurrent SCOE file generation not fully prevented	COL-RIBRE-SPR-16182
SPR-16222	TEV: User Event list scrolled on event selection	COL-RIBRE-SPR-16222
SPR-100373	Log files are spread all over the system	COL-RIBRE-SPR-17827
SPR-100584	UCL Browser: Strange Error Message	
SPR-100760	CC error for non unique integer calibrations in bytestream mesurements	COL-RIBRE-SPR-18919
SPR-100820	Exception: DIRECTORY_DOES_NOT_EXIST raised	
SPR-101652	UCL Debugger does not find its default font	
SPR-101681	CGS requires textedit	
SPR-101692	IMDB Reference by ADU does not work for SPC_1553B_ANALOG_UNSIGNED	COL-RIBRE-SPR-21275
SPR-101830	HLCL: result differ TP description	
SPR-101861	USS Displays: APs asking for input do not work on mcs-ctm-ws-2	COL-RIBRE-SPR-21989
SPR-101862	CGS HK Parameter missing for List of Measurements with processing disabled	COL-RIBRE-SPR-21987
SPR-101864	Error reported after quit of TEV	
SPR-101893	Insufficient CSS description in the CGS user manual	
SPR-101946	The log/error messages of XML SCOE file generator are user unfriendly	COL-RIBRE-SPR-22180
SPR-101948	Lots of error messages in MOCS console when TSS is down	
SPR-101967	Internal Error In HLCL Interpreter	
SPR-101993	LOT syncronisation is o.o.L message appears sporadically on TQVS_SRF, TQVS_DEVEL and TQVS_ETM	COL-RIBRE-SPR-17576
SPR-101995	Single shared memory instance inhibits multiple CMAS on one host	
SPR-102005	Command History Entries for non CCSDS Telecommands	COL-RIBRE-SPR-22381
SPR-102045	FA SAS Startup Fails	
SPR-102049	CSS Kernel Does Not Terminate	
SPR-102052	CLS Batch Compiler reports CONSTRAINT_ERROR	
SPR-102059	HCI crash	COL-RIBRE-SPR-22552
SPR-102092	MDB and TRDB on Oracle Standard Edition	
SPR-102093	Allow to run CGS without TRDB	
SPR-102096	Upgrade all Oracle LONG/LONG RAW columns to CLOB/BLOB	
SPR-102106	More detailed timing information missing concerning TSS Alive-Msg-Checks	
SPR-102119	CLS editor: user unfriendly error message	
SPR-102120	HCI Raw Data Dump Tool: packet format not correct	

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SPR-102121	TEV: user unfriendly error message	
SPR-102126	HCI: incomplete message at process termination	
SPR-102130	Constraint_Error raised in CLS Editor's Store Operation	
SPR-102139	Constraint_Error raised when calling htonl or ntohl in Unix_Interface_Old with values > 2**31	COL-RIBRE-SPR-22801
SPR-102140	AUTO_COMPILE -clean doens't work correctly	
SPR-102145	CGS Administration: Install user launches wrong Menu	COL-RIBRE-SPR-22817
SPR-102146	Start of an AP takes a long time	
SPR-102149	for CGS API missing version information	
SPR-102155	Errors when using the Ada Compilation Unit Opcodes part of the CSS_API 7.2.0	COL-RIBRE-SPR-22893
SPR-102160	Make the definition of GPRBUILD_HOME during CSS installation more convenient/consistent	COL-RIBRE-SPR-22906
SPR-102162	The directory $CSS_MODEL_ATTR_DIR and statevectors/mon. tables are not writeable for group cgs	COL-RIBRE-SPR-22928
SPR-102163	CGS7.2 FLAP Compile does not work	COL-RIBRE-SPR-22931
SPR-102172	TEV Raw Data Dump Tool: packet format not correct	
SPR-102178	Very long unknown identifier causes internal error in HLCL window	
SPR-102179	Internal error: Exception CONSTRAINT_ERROR: cls_object_table.adb:3145 invalid data	COL-RIBRE-SPR-23020
SPR-102183	Error when executing an HLCL sequence with line longer than 256 characters	COL-RIBRE-SPR-23039
SPR-102186	HLCL: I := 100 - Identifier is ambiguous	
SPR-102191	HK Value CGS_ARCH_COLLECT incorrect	COL-RIBRE-SPR-23056
SPR-102193	TES sends acquisition status "INVALID" together with OOL data	
SPR-102197	Redesign for replacement of Streams by Vectors	
SPR-102200	Make CLS pointers controlled references	
SPR-102209	HCI disappeared suddenly	
SPR-102221	Shared memory cannot be deleted by other user than the one that created it	COL-RIBRE-SPR-23209
SPR-102227	CGS 7.2.1 did not implement COL-RIBRE-SPR-11742	COL-RIBRE-SPR-23261
SPR-102230	I_MDB crash when exporting a CDU	COL-RIBRE-SPR-23254
SPR-102234	Consistency Check CGS-ERR-0081: Measurements are not referenced in an ADU description	COL-RIBRE-SPR-23213
SPR-102235	IMDB does only provide WDU synoptics for overview synoptics of EGSE test nodes	
SPR-102236	introduce single event logging mechanism	
SPR-102237	Replace XView toolkit by GtkAda	
SPR-102246	CGS API returns command opsnames uppcase only	COL-RIBRE-SPR-23290
SPR-102247	TEV Data Set Generation from EVL fails	
SPR-102249	The import of some UCL_USER_LIBRARYs takes a long time	COL-RIBRE-SPR-23300
SPR-102258	Cannot delete test session from TSCV (cause: SESSION_IS_USED)	COL-RIBRE-SPR-23355
SPR-102261	Source Code in SCOE files	

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SPR-102264	MDB_Items.Item_Base_Type returns empty string for VIRTUAL and CDU	
SPR-102265	Sporadically occurance of message 'Could not store archive file'	COL-RIBRE-SPR-23376
SPR-102271	missing script to create temporary fix	
SPR-102279	Exception raised when trying to create an Onboard reference to a CMAS_SOCKET_OUT_ELEMENT with CSS	COL-RIBRE-SPR-23426
SPR-102282	new Message Window display pathnames without '\'	
SPR-102284	vit_manager: LOAD: STATUS WAS NOT OK !!	
SPR-102286	UCL_USER_LIBRARY TIME_UTILITIES cannot be shared across different CCUs	COL-RIBRE-SPR-23447
SPR-102287	Ada package Model_Connection raises ENVIRONMENT.VARIABLE_UNDEFINED if CSS_HOME undefined	COL-RIBRE-SPR-23449
SPR-102288	No meaningful report during generation of a simulation kernel in CSS	COL-RIBRE-SPR-23450
SPR-102289	CSS model compilation fails - missing unbounded_string_vectors	
SPR-102290	CSS CTG server raises INTERNAL_ERROR in case of compilation errors	
SPR-102291	Errors in cmas_stub.gpr - build fails	
SPR-102292	CIS_01 disconnected	
SPR-102293	Compile of CMAS-stub failed - cgs-log.ads not found	
SPR-102299	WebCGS: Revise software design: Externalize data files	
SPR-102303	WebCGS: Revise Measurement Data	
SPR-102304	Inability to load commands on MCS Tools on CTM Workstations	COL-RIBRE-SPR-23238
SPR-102305	CLS/HLCL: alias definition in case statement does not work	COL-RIBRE-SPR-23462
SPR-102309	Error when closing SIMM model Observer	COL-RIBRE-SPR-23496
SPR-102310	CSS_UI on ws1 lost connection to CSS kernel (null pointer problem)	COL-RIBRE-SPR-23497
SPR-102311	Constraint_Error raised by CSS specific HLCL commands on MDB subitems	
SPR-102312	CSS kernel generated with GNAT 6.3.2 crashes	
SPR-102313	Internal Error from HLCL procedure execution	
SPR-102314	SS kernel generated with GNAT 6.3.2 crashes II	
SPR-102315	CIS shall log HLCL commands/responses in the TRDB	COL-RIBRE-SPR-23513
SPR-102318	Problem inducing handling of UCL Libraries by CGS	
SPR-102320	E-USOC: How to load a session in TSCV for replay	COL-RIBRE-SPR-23473
SPR-102321	Remove printer housekeeping values from CGS	
SPR-102322	Periodic errors reported by Model_Connection	COL-RIBRE-SPR-23545
SPR-102324	CSS/CMAS does not restore the saved packet configuration in a deterministic way	COL-RIBRE-SPR-23554
SPR-102325	End item detail report fails	COL-RIBRE-SPR-23553
SPR-102327	engineering unit missing in end_item.csv	
SPR-102329	Sporadic "Current SMT became invalid(SMT_NOT_TRUSTABLE)." error messages at TQVS	COL-RIBRE-SPR-23569
SPR-102338	message_window: no reconnect to server possible	
SPR-102340	UCL Debugger aborts due to Gtk-ERROR	

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SPR-102341	Wording of "UCL enditem reloaded" message	
SPR-102343	CLS.FATAL_ERROR: Import list inconsistent	
SPR-102350	LOT syncronisation is o.o.L message appears sporadically on TQVS_SRF, TQVS_DEVEL and TQVS_ETM	
SPR-102351	export script for CMDH backup	COL-RIBRE-SPR-23655
SPR-102355	CIS not starting with error in configuration	COL-RIBRE-SPR-23681
SPR-102356	CIS failure on CTM K4	COL-RIBRE-SPR-23653
SPR-102364	Concurrently running Consistency Checks not possible	COL-RIBRE-SPR-23753
SPR-102365	CLS batch compile changes erroneously the Consistency Date for wrong CCU	COL-RIBRE-SPR-23754
SPR-102366	In CSS the BURST_PULSE execution sometimes fails	COL-RIBRE-SPR-23765
SPR-102369	User library marked as not up to date in frozen scope after compilation in different scope	COL-RIBRE-SPR-23768
SPR-102370	During activation of APM all USS synoptics became invalid	COL-RIBRE-SPR-23760
SPR-102371	FILE_IO_LIB function PUT_LINE accept strings with only max. 258 byte	COL-RIBRE-SPR-23777
SPR-102375	Can not start USS Executor	COL-RIBRE-SPR-23789
SPR-102377	Wrong timestamps of CIS event messages	
SPR-102379	Problems to open old monitoring windows	COL-RIBRE-SPR-23803
SPR-102380	TP64 fails, when executed with CIS in autotest	
SPR-102385	DBS_CENTRAL_EXEC reported a severe problem	COL-RIBRE-SPR-23828
SPR-102387	Consistency Checker: Engineering Range for measurments are still mandatory aggregates	COL-RIBRE-SPR-23837
SPR-102389	ADU packet status updates not delivered by CIS	
SPR-102390	new message time format restricted to milli seconds	
SPR-102393	Ground library command CLOSE_AP_OUTPUT_WINDOW doesn't work with new message window	
SPR-102395	I-code for Automated Procedure not found	
SPR-102396	message_clients: no reconnect to server possible	
SPR-102406	'initialize_mdb' reports errors	
SPR-102408	DBS error during create session	
SPR-102409	message window does't start	
SPR-102410	$CGS_HOME/patches/patch_cgs.sh is too slow	
SPR-102411	Engineering value log files not stored	
SPR-102413	Empty event logs if time frame end not specified	
SPR-102414	HLCL Comand Window: Step function does not work	
SPR-102415	TEV: no events from default session displayed	
SPR-102417	TP61: Steps 61.1.34 and 61.1.34 not necessary ?	
SPR-102419	TP64: HLCL errors	
SPR-102426	Replay mode does not work	
SPR-102428	HLCL interpreter raises Table_Error when calling Stop while a sequence is suspended	

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SPR-102429 TEV: error messages
SPR-102430 TEV: data listing for CSV format does not work
SPR-102431 HCI: configuration filename not displayed for OOL window
SPR-102433 TEV: internal error
SPR-102438 TP-59: Missing USS main window after loading of screen setup
SPR-102439 IMDB: constraint error when exit process
SPR-102440 TP-59: Quick Graph doesn't animate
SPR-102443 ADU Status doesn't display correct data
SPR-102451 CLS reports internal error when requested item not up to date
SPR-102455 cgs_calendar.adb:705 range check failed
SPR-102457 ADU Status Displays raise constraint error during HCI shutdown
SPR-102459 daily log files are corrupted sometime
SPR-102460 UCL debugger raised table error
SPR-102464 IMDB reports LOGGER.COMMUNICATION_ERROR after System Shutdown
SPR-102466 Consistency Checker reports PROGRAM_ERROR
SPR-102468 USS Quick Graphs created by HCI via remote interface run into symbol overflow

4.9 Temporary fixed Problems

4.9.1 Further Open Problems

- SPR-100868 - SAS linked with the CGS API and using posix.process_primitives.exit_process are hanging. Use the system call _exit (not exit !) instead of posix.process_primitives.exit_process.

4.9.2 Known Restrictions

- It is not possible to prepare a telecommand (SWOP, FLAP, PUS_TC, and TC) via CIS, if this telecommand is defined with garded parameters in the parameter lists.
- SPR-101245 - CIS clients to implement sufficient large timeouts that can deal with a 10 seconds delay of 'Login' or 'subscribe<service>' requests.
- Not all interfaces for the new CGS IDL 2.0 are implemented in CGS:
  Note: unsupported `'oneway void'` calls are stubs, just generating a debug message
  `'<Procedure_Name> -- to be implemented --'` with debug output enabled.

  - o - not (yet) supported by CGS:
    - Calibration description as telemetry property:
      - o not yet supported by CGS: no calibration updates are sent by CIS
    - Telemetry report deliveries:
      - o Telemetry data reports not yet supported:
      - o `Telemetry.getTelemetryReport` raises `ServiceNotAvailable`.
      - o `Telemetry.cancelTelemetryReport` is empty.
      - o `TelemetryClient.telemetryReportDelivery` is never called by CIS.

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5. Installation Procedures

This software shall be used on Intel PC with SUSE Linux Enterpriser Server 10 (SLES10).

5.1 Complete Installation

For a complete installation follow the instructions of CGS installation manual ref. [AD 2].
To upgrade from CGS 6 follow the instructions of CGS installation manual, chapter 8.

Remark: The actual CGS installation manual is on CD below /<mountpoint>/doc/manual.

5.2 Patch Installation (based on CGS 7.2.2)

For a patch installation follow the next instructions:

5.2.1 Needed passwords

```
1. <cgsadmin>      (UNIX user)
2. root            (UNIX user)
3. <oracle>        (UNIX user)
4. <MDB_ADM>       (oracle user)
```

5.2.2 Installation steps

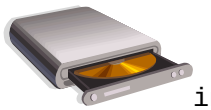
1. login as <cgsadmin> on DB server host

2. cgs shutdown via cgs start_center

3. stop command history / central distributor (on command history server)
   in shell: $CGS_HOME/gsaf/dbs/bin/common/stop_cmd_history
   in shell: $CGS_HOME/gsaf/dbs/bin/common/stop_central_distributor

4. quit cgs start_center

5. terminate the cgs_daemon
   in shell: killall -9 cgs_daemon



6. insert CGS DVD CGS_7.3.0

7. mount DVD

8. install all products from DVD
   in shell: /<mountpoint>/installer.sh

   Select Exit (after installation)

9. unmount DVD

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10. update the MDB / MDB stored procedures

    in shell:

    ```
    $CGS_HOME/patches/patch_mdb.sh
      -- needs ca. 10 minute
    ```

    REMARK: The next command is only necessary for a better performance of MDB access.
    This command is optional and the usage shall be decided by projects.

    $CGS_HOME/gsaf/mda/config/mdb/install/admin_scripts/gather_mdb_stats

11. update CGS directory structure and delete unwanted files

    in shell:

    ```
    $CGS_HOME/patches/patch_cgs.sh
    ```

12. recreate your SCOE data (generate SCOE files)

    CGS requests to recreate SCOE data due to USS extensions.

13. rebuild your CSS models

    CGS requests to rebuild all CSS models due to CSS extensions.

14. rebuild your special application software (SAS)

    CGS requests to rebuild SAS.

15. reboot server and if the server is ready, reboot all clients

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6. Acronyms

AD	Applicable Document
ADD	Architectural Design Document
AP	Automated Procedure
ASCII	Americal Standard Code for Information Interchange
ATP	Authorization to Proceed
ATV	Autonomous Transfer Vehicle
CCB	Configuration Control Board
CCU	Configuration Control Unit
CCSDS	Consultative Commitee for Space Data System
CGS	Core Ground System
CDU	Configuration Data Unit
CLS	CGS Language System
COTS	Commercial Off-The-Shelve
CPL	Crew Procedure Language
CPU	Central Processing Unit
D&D	Design and Development
DMS	Data Management System
DOF	Degree of Freedom
EGSE	Electrical Ground Support Equipment
EM	Engineering Model
EQM	Engineering Qualification Model
ESA	European Space Agency
ETM	Electrical Test Model
FDIR	Fault Detection, Isolation and Recovery
FM	Flight Model
GMT	Greenwich Mean Time
GNC	Guidance Navigation Control
GPS	Global Positioning System
HCI	Human-Computer Interface
HL	High Level
HLCL	High Level Command Language
HW	Hardware
ICD	Interface Control Document
IF	InterFace
ISS	International Space Station
LL	Low Level
MDB	Mission Database
MET	Mission Elapsed Time
MMS	Matra Marconi Space
N/A	Not Applicable
PDB	Project Data Base
PROM	Programmable Read Only Memory
RAM	Random Access Memory
RD	Reference Document
RFW	Request for Waiver
ROM	Read Only Memory
RV	RendezVous
S/C	SpaceCraft
SCCB	Software Configuration Control Board
SOC	Statement of Compliance
SPR	Software Problem Report
SRD	Software Requirements Document
SUM	Software User Manual
SW	SoftWare
SWRU	Software Replaceable Unit
TBC	To Be Confirmed
TBD	To Be Defined
TC	TeleCommand
TM	TeleMetry
TRR	Test Readiness Review
UCL	User Control Language
URD	User Requirements Document
UTC	Universal Time Coordinated
VCD	Verification Control Document
VTP	Validation Test Plan

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